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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/741,790	12/19/2003	Christopher C. Fraser	MPI00-535OMNICN1M	6648

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MILLENNIUM PHARMACEUTICALS, INC.
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CAMBRIDGE, MA 02139

EXAMINER	
JIANG, DONG	
ART UNIT	**PAPER NUMBER**
1646	
MAIL DATE	**DELIVERY MODE**
06/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/741,790	FRASER ET AL.	
	Examiner	Art Unit	
	DONG JIANG	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *86-92 and 95-101* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *86-92 and 95-101* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED OFFICE ACTION

Applicant's amendment filed on 14 February 2008 is acknowledged and entered. Following the amendment, claims 89, 90, 98 and 99 are amended.

Currently, claims 86-92 and 95-101 are pending and under consideration.

Withdrawal of Objections and Rejections:

The rejection of claims 89, 90, 98 and 99 under 35 U.S.C. 112, second paragraph, as being indefinite is withdrawn in view of applicant's amendment.

Rejections under 35 U.S.C. §112:

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 86-92 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, for the same reasons set forth in the previous Office Action mailed on 30 January 2007, at pages 4-5.

The independent claim 86 is directed to an isolated antibody specifically binding to a polypeptide variant of SEQ ID NO:417. To an extent the claim encompass antibodies that bind to epitopes not found in the particularly disclosed sequence.

Vas-Cath Inc. v. Mahurkar, 19USPQ2d 1111, clearly states that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention*. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" (See page 1117.) The specification does not "clearly allow persons of

ordinary skill in the art to recognize that [he or she] invented what is claimed." (See *Vas-Cath* at page 1116).

The limitations of present claim 86 encompasses significant structural dissimilarity of the polypeptide as compared to the disclosed SEQ ID NO:417. The instant specification merely discloses *one* amino acid sequence of SEQ ID NO:417, and no other variants or epitopes thereof or antibodies thereto meeting the limitations of these claims were ever identified or particularly described, and no sequence variations have been shown to correlate with the biological activity required by the claim. Thus, with the exception of the polypeptide of SEQ ID NO:417 and antibodies thereto, the skilled artisan cannot envision the detailed chemical structure of the encompassed % variants. Therefore, the specification does not reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the % variants of the polypeptide of SEQ ID NO:417, the epitopes not found in SEQ ID NO:417, or the antibodies thereto.

Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of isolating it. The compound itself is required. See *Fiers v. Revel*, 25 USPQ2d 1601 at 1606 (CAFC 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016.

One cannot describe what one has not conceived. See *Fiddes v. Baird*, 30 USPQ2d 1481 at 1483. In *Fiddes*, claims directed to mammalian FGF's were found to be unpatentable due to lack of written description for that broad class. The specification provided only the bovine sequence.

The Office, therefore, concludes that SEQ ID NO:417, by itself , is not representative of all variants enconpassed in claim 86, and that to the extent those variants might possess epitopes not found on the disclosed polypeptide, and antibodies to such epitopes have not been described. With the exception of the polypeptide of SEQ ID NO:417 and antibodies thereto, no other variants of the polypeptide or antibodies thereto meets the written description provision of 35 U.S.C. §112, first paragraph. Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. §112 is severable from its enablement provision (see page 1115).

Rejections Over Prior Art:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 86, 87, 89, 90, 95, 96, 98 and 99 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. (J. Lipid Res., 1995, 36:2212-2218), and in view of Campbell, A. (Laboratory Techniques in Biochemistry And Molecular Biology, Volume 13, Chapter 1, pages 1-33, 1984), for the reasons of record set forth in the last Office Action mailed on 11 September 2007, at pages 3-4.

Applicants argument filed on 14 February 2008 has been fully considered, but is not deemed persuasive for the reasons below.

At page 6 of the response, the applicant argues that Nakagawa's rat lipase shares only 54% identity with the full length human TANGO294 lipase of the present invention, and such a low percent identity likely leads to very different three dimensional molecules due to differences in folding, thus, an antibody generated using the full length rat lipase from Nakagawa would likely not specifically bind to the human TANGO294 lipase of the present invention; that Nakagawa does not analyze their lipase to identify possible antigenic regions and they don't specifically point to the 23 amino acids identified by the Examiner; that Nakagawa does not teach nor make any antibodies to their lipase; and that it would not have been obvious to one of skill in the art at the time of filing to select the 23 amino acids identified by the Examiner to

make antibodies. This argument is not persuasive because although some antibodies generated using the full length rat lipase from Nakagawa would include those not specifically bind to the human TANGO294 lipase of the present invention, the antibody pool generated using the full length as well as antigenic fragments of Nakagawa's rat lipase would encompass those that *would* specifically bind to the human TANGO294 lipase of the present invention as the art has established that the size of an epitope is approximately equivalent to 5 to 7 amino acids (Immunity, A Short Course, Benjamini et al., 2nd ed., 1992, page 40). Further, while the examiner agrees that it would not have been obvious to one of skill in the art at the time of filing to select the 23 amino acids to make antibodies (such as monoclonal antibodies), the antibody pool generated using Nakagawa's rat lipase would encompass those specific to the epitopes of said 23 amino acids. The present claims, as written, do not exclude those antibodies, i.e., the claims encompass *polyclonal* antibodies (the "pool"). With respect to the argument that Nakagawa does not teach nor make any antibodies to their lipase, the method/technique of making antibodies to a known protein has been well established and widely used in the art.

Claims 88 and 97 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. (J. Lipid Res., 1995, 36:2212-2218), and in view of Campbell, A. (Laboratory Techniques in Biochemistry And Molecular Biology, Volume 13, Chapter 1, pages 1-33, 1984), as applied to claims 86, 87, 89, 90, 95, 96, 98 and 99 above, and further in view of Sandhu (Critical Reviews in Biotech., 1992, 12(5/6): 437-462, especially pages 449-450), for the reasons of record set forth in the last Office Action mailed on 11 September 2007, at pages 4-5.

Applicants argument filed on 14 February 2008 has been fully considered, but is not deemed persuasive for the reasons below.

At page 7 of the response, the applicant argues that the disclosure of the primary reference, *i.e.,* Nakagawa does not render the claimed antibodies obvious and therefore the combination of Nakagawa and Campbell with Sandhu does not remedy the deficiency of the primary reference. This argument is not persuasive for the reasons above.

Claims 91, 92, 100 and 101 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. (J. Lipid Res., 1995, 36:2212-2218), and in view of Campbell, A. (Laboratory Techniques in Biochemistry And Molecular Biology, Volume 13, Chapter 1, pages 1-33, 1984), as applied to claims 86, 87, 89, 90, 95, 96, 98 and 99 above, and further in view of Hermanus et al., US 3,654,090, for the reasons of record set forth in the last Office Action mailed on 11 September 2007, at page 5.

Applicants argument filed on 14 February 2008 has been fully considered, but is not deemed persuasive for the reasons below.

At page 8 of the response, the applicant argues that the disclosure of the primary reference, *i.e.,* Nakagawa does not render the claimed antibodies obvious and therefore the combination of Nakagawa and Campbell with Hermanus does not remedy the deficiency of the primary reference. This argument is not persuasive for the same reasons above.

Conclusion:

No claim is allowed.

Advisory Information:

Any inquiry concerning this communication should be directed to Dong Jiang whose telephone number is 571-272-0872. The examiner can normally be reached on Monday - Friday from 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Nickol, can be reached on 571-272-0835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dong Jiang/
Primary Examiner, Art Unit 1646
5/26/08